• T. Kim Yazzie – Fish Biologist
• Navajo Nation Department of Fish & Wildlife – Management & Research Section
San Juan River

- Major Tributary to the Colorado River
- Flows 383 miles through Colorado, New Mexico, and Utah
- Endangered Fish Species Protected by Federal, State, Tribal listing
  - Razorback Sucker, Colorado Pikeminnow, Roundtail chub, & Humpback chub
Public Service Company of New Mexico (PNM) Fish Passage Facility - 2003

- San Juan River Basin Recovery Implementation Program (SJRRIP) - 1992
  - Funded by B.O.R.
- Management Actions on SJR
  - Conserve CPM & RBS in the basin with recovery goals est. under ESA
  - Proceed H₂O development
Public Service Company of New Mexico (PNM) Fish Passage Facility - 2003

• San Juan River Basin Recovery Implementation Program (SJRRIP)

• Management Actions
  • Augmentation Pgrm
  • Fish Passage
  • Monitoring
  • Non-native Removal
PIT Tag - Passive Integrated Technology
PIT Antenna Locations on SJR
• April 1 – October 30 (212 days)
• 7 days a week
• Selective fish passage were all fish counted & released upstream
• Native species are weighed, length is recorded & released
• Endangered species are scanned, weighed, length, & released
• Non-natives length recorded, checked for tags & removed
• Native species

• Colorado pikeminnow (40 yrs.)
• Razorback suckers (40 yrs.)
• Roundtail chub (15 yrs.)

Flannelmouth sucker (35 yrs.)
Bluehead sucker (20 yrs.)
Mottled sculpin (4 yrs.)
Speckled dace (3 yrs.)
Non-native species in the San Juan River

- Channel catfish
- Black Bullhead
- Yellow Bullhead
- Largemouth bass
- Smallmouth bass
- Striped bass

- Common carp
- Green sunfish
- Bluegill
- Walleye
- White Sucker
- Red shiner
- Rainbow trout
- Brown trout
- Fathead minnow

![Fish Images]
### Expected Fish in 2015 - 12,000

<table>
<thead>
<tr>
<th></th>
<th>Native</th>
<th>Non Native</th>
<th>TOTAL</th>
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<tr>
<td>March</td>
<td>472</td>
<td>5</td>
<td>477</td>
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<tr>
<td>April</td>
<td>1818</td>
<td>3</td>
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<td>May</td>
<td>1607</td>
<td>22</td>
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<td>June</td>
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<td>July</td>
<td>3395</td>
<td>779</td>
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<td>August</td>
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<td>443</td>
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<td>Sept</td>
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<tr>
<td>Oct</td>
<td>59</td>
<td>1</td>
<td>60</td>
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<td><strong>TOTAL YR.</strong></td>
<td><strong>10,393</strong></td>
<td><strong>879</strong></td>
<td><strong>11,272</strong></td>
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Navajo Agricultural Products Industry
Razorback Sucker Grow-Out Ponds

• NAPI Razorback Grow-out Ponds
• Operated by NNDFW
• Accounts for approximately 40% of Razorback stocking annually
• 3 Ponds
  • West Avocet 3 acres
  • East Avocet 2.4 acres
  • Hidden Pond 2.5 acres
• Ponds are in use from April - October
NAPI Pond Operation

**Daily Operations**

- Monitor Water Quality
- Feeding
  - Temperature
  - Body weight
- Mortalities

**Monthly Operation**

- Sample Counts
  - >30 individuals
  - TL, SL, WT
- Calculate feeding rates
HARVEST

• Passive Harvest
  • Begins when 70% > 300mm
  • Fyke nets
  • 2 Stocking locations

• Active Harvest
  • Drain Ponds
  • Harvest remaining fish
  • 4 Stocking locations
Augmentation Success

- NAPI Ponds have the best growth and return rates of razorback suckers
- Razorback Sucker in-river survival is best from NAPI ponds
- 6000 - 8000 fish/year are stocked from the NAPI ponds into the San Juan River
Monitoring/ Non - native removal
Any Questions?